

BROWN BEAR ANNUAL SURVEY AND INVENTORY PERFORMANCE REPORT

STATE: Alaska

GRANT AND SEGMENT NR.: W-27-4

PROJECT NR.: 4.0

WORK LOCATION: Statewide

PERIOD: 1 July 2000–30 June 2001

PROJECT TITLE: The Status of Alaska Brown Bears and Factors Influencing Their Populations

PROJECT LOCATION: Game Management Units 1, 2, 3, and 5

REPORT DESCRIPTION: This statewide performance report includes the four regions involved in brown bear survey and inventory activities. Regional activities are listed before specific activities by game management unit.



The Status of Alaska Brown Bear and Factors Influencing Their Populations in Region I

Regionwide Activities

Prepare a draft brown bear management report. The 2-year brown bear management report was completed in May 2001 and submitted to headquarters.

Write a survey and inventory annual performance report. This draft satisfies the activity as described.

Provide information to the Board of Game on brown bear management. During fall 2000 Region I staff provided detailed information to the Board on brown bear population information and harvest trends, notably Units 1 and 4. The Board discussed implementing suggestions of the Unit 4 Brown Bear Management Team, and they adopted a registration permit hunt format for Unit 5.

Collect hunter and harvest information from all bears harvested and presented for sealing. Area biologists and other staff tracked harvest trends and collected biological samples as possible.

Record incident information on bears killed in defense of life or property. Area biologists worked with FWP troopers, municipal police officers, and private citizens to collect information on DLP kills. Two bears were killed in Hoonah, and one each in Hyder, Sitka, Yakutat, and Haines under DLP provisions. While

walking a salmon stream on Chichagof Island, CFMAD technicians killed one other bear.

Monitor the harvest, seal harvested bears, and analyze data. ADF&G Wildlife Conservation staff as well as FWP Troopers and designated sealing agents sealed brown bears harvested in the region. A brochure concerning brown bear hunting ethics was prepared for publication in May 2001. Over 200 brown bears were harvested and sealed in the region.

Work with communities and individuals to reduce bear/garbage problems. Area biologists worked with communities to reduce the availability of garbage to bears, notably in Haines, Sitka, and Meyers Chuck.

Unit 1

Participate in planning to help resolve the Chilkoot River bear/human conflict. The Unit 1D assistant area biologist worked closely with a stakeholders group in Haines to resolve this issue, attending 8 public meetings on the subject. By the end of the regulatory year local officials were considering many of the suggestions of the team.

Unit 4

Radiotag and aerially track a subpopulation of bears. By the end of the regulatory year, a total of 65 brown bears to be used for a population estimate had been tagged and were on the air. Biologists were beginning the process of tracking these bears on northeast Chichagof Island.

Monitor public use of the Pack Creek viewing area on the Stan Price State Wildlife Sanctuary. This activity was successfully carried out July–September 2000 and was begun for the 2001 field season in June. A total of 1,400 people visited Pack Creek.

Segment Period Project Costs: \$165.8

The Status of Alaska Brown Bears and Factors Influencing Their Populations in Region II

Regionwide Activities

Activity 1: Prepare a brown bear management report.

Draft brown bear management reports were prepared during spring 2001

Activity 2: Monitor the brown bear harvest through field observations, brown bear sealing reports, and interviews with successful hunters.

Preliminary harvest information was available from sealing reports.

Activity 3: Seal bear skins and skulls, determine the sex, and extract a tooth for aging from brown bears presented for sealing by hunters.

Activity 4: Obtain estimates of ages of harvested bears by tooth sectioning.

Teeth are sent in on a biannual basis for sectioning and aging. Spring 2001 results will not be available until fall 2001.



Activities by Unit

Unit 6

Activity 1: Monitor the brown bear harvest through field observations, brown bear sealing reports, and interviews with successful hunters.

The preliminary 2000/01 harvest:

Males 33	Females 15	Total 48
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Units 7 and 15

Activity 1: Monitor the brown bear harvest through field observations, brown bear sealing reports, and interviews with successful hunters.

The preliminary 2000/01 harvest:

Males 8	Females 5	Total 13
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This harvest included 7 bears taken by nonsport methods (e.g. DLP, illegal, etc.).

Unit 08

Activity 1: Monitor the brown bear harvest through field observations, brown bear sealing reports, and interviews with successful hunters.

Results: We issued hunting permits to 555 people, 276 fall permits and 279 spring permits. During the fall season, 211 hunters went afield and killed 49 bears. In the spring season 235 hunters went afield and killed 121 bears. The annual sport harvest was 170 bears, 121 males (71%) and 49 females (29%). Three bears (2 males and a female) were killed in the federal brown bear subsistence hunt. An additional 9 non-sport mortalities were documented as follows: defense of life or property (DLP) - 5 (4 males, 1 unknown sex); natural/unknown - 4 (1 male, 1 female, 2 unknown sex).

The 2000–01 sport harvest of 170 bears exceeded the annual harvest objective of 150 bears. Males composed 71% of the harvest, well above the minimum objective of 60% males. Intensive aerial survey data suggest that the unitwide bear population continues to be stable to slightly increasing.

Activity 2: In cooperation with Kodiak National Wildlife Refuge, annually survey a portion of the island to establish baseline bear density estimates and to detect changes in the population.

Results: In late May, we joined Kodiak NWR staff in conducting an intensive aerial survey of brown bears on the Aliulik Peninsula on southwestern Kodiak island. The survey data indicate that the bear density of that area has declined significantly since the last survey in the same area in 1993. Although the data reflect a decrease from 216 bears/1000 km² in 1993 to 151 bears/1000 km² in 2001, I think we should review the data with caution prior to making any

management decisions. Harvest data do not support the results of the survey; there were many compounding factors (such as timing, snow conditions, and survey personnel) which may have affected the outcome. Based on these results, I recommend no change in the current management objectives or number of bear hunting permits for this area, and serious consideration of repeating the Aliulik survey next spring.

Activity 3: Develop a draft Unit 8 brown bear management plan.

Results: We initiated development of a comprehensive bear conservation and management plan for the Kodiak archipelago. The plan was developed by a Citizen's Advisory Committee with representatives from 12 diverse user groups, with technical support by the department and staff from the US Fish and Wildlife Service. The draft plan was completed in early May 2001, and will be open for public review until November 2001.

Units 9 and 10

Activity 1: Monitor the brown bear harvest through field observations, brown bear sealing reports, and interviews with successful hunters.

The preliminary 2000/01 harvest:

Unit 9	Males 10	Females 2	Total	12
Unit 10	Males 7	Females 4	Total	11

Activity 2: Encourage unit residents to reduce attractive nuisances that lead to DLP kills.

Brown bears and humans continue to come into conflict in virtually every village in Unit 9. The availability of a new bear safety video may improve educational efforts with local residents and recreational visitors.

Activity 3: Conduct population trend counts adjacent to heavily used salmon streams.

Four repetitive surveys were completed near Black Lake in Unit 9E between 6 August and 9 August, 2000. A total of 987 bears was classified.

Units 11 and 13

Activity 1: Monitor the brown bear harvest through field observations, brown bear sealing reports, and interviews with successful hunters.

The preliminary 2000/01 harvest:

GMU 13	Males 88 (60%)	Females 58 (40%)	Total	146
GMU 11	Males 9 (75%)	Females 3 (25%)	Total	12

Unit 14

Activity 1: Prepare a biennial brown bear management report.

Completed July 1998-June 2000 Unit 14 Brown Bear Report

Activity 2: Monitor brown bear harvest through field observations, brown bear sealing reports, and interviews with successful hunters.

The preliminary 2000/01 harvest:

Males 15 Females 6 Unknown 3 Total 24

The harvest includes 7 bears (5 males, 1 female and 1 unknown sex) killed in defense of life and property and 2 unknown sex bear killed by a train or vehicle.

Activity 3: Seal bear skins and skulls, determine the sex, and extract a tooth for aging from brown bears presented for sealing by hunters.

The Palmer and Anchorage staff sealed approximately 450 brown bears from Unit 14 and other units combined.

Activity 5: Report harvest and population information to Board of Game.

Reported to Board of Game during February 2000 and commented on 1 proposal specific to Unit 14B, which was adopted.

Unit 16

Activity 1: Prepare a biennial brown bear survey and inventory management report.

Completed July 1998-June 2000 Unit 16 Brown Bear Report .

Activity 2: Monitor the brown bear harvest through field observations, brown bear sealing reports, and interviews with successful hunters.

The preliminary 2000/01 harvest:

Males 51 Females 30 Total 81

Activity 3: Seal bear skins and skulls, determine the sex, and extract a tooth for aging from brown bears presented for sealing by hunters.

The Palmer staff sealed approximately 120 brown bears from Unit 16 and other units combined.

Unit 17

Activity 1: Monitor the brown bear harvest through field observations, brown bear sealing reports, and interviews with successful hunters.

The preliminary 2000/01 reported harvest:

Males 68 Females 35 Total 103

Activity 2: Work with local home and recreational cabin owners to try and reduce bear damage and defense of life and property kills.

Reported DLP kill in GMU 17 was 10 brown bears.

Other activities funded by Federal Aid on this project:

Palmer staff participated in brown/black bear survey technique investigation in northern Unit 16, 14B and 13E: (85 hours).

Segment Period Project Costs:

Fiscal year 2000–2001	Region			Total
	II	III	V	
Planned	116.0			
Actual	115.1			

The Status of Alaska Brown Bears and Factors Influencing Their Populations in Region III

Regionwide Activities

Activity 1: Write an annual survey and inventory performance report.

We wrote annual performance reports for all units.

Activity 2: Prepare a draft brown bear management report.

We wrote draft brown bear management reports for all units.

Activity 3: Provide information to the Board of Game on brown bear management during the regulatory process.

We did not provide information to the Board of Game on brown bear management because Region III was not on the board schedule for this year.

Activity 4: Obtain estimates of ages of harvested bears by tooth sectioning.

We collected teeth during the sealing process and submitted them for aging.

Activities by Unit

Units 12

Activity 1: Review and revise management objectives.

We reviewed the harvest objective by comparing harvest data to the estimated Unit 12 grizzly bear population. Based on this analysis, and no changes to the harvest objective was necessary. The Unit 12 grizzly bear objective was also discussed with the local advisory committees. Primary discussion points were if this harvest level was adequate to benefit moose calf survival

Activity 2: Monitor harvests, seal harvested bears, and analyze harvest data.

We sealed 36 brown bears (63% male) and analyzed the harvest information to determine if harvest was causing unit-wide or area reduction in the bear population. We also evaluated the effects of bear harvest on moose calf survival.

Activity 3: Monitor berry abundance along 3-5 transects in different bear habitats.

We monitored blueberry abundance within the Tanana River valley using 4 permanent transects (5 1-meter² plots/transect). This was the first year of monitoring. The intent is to

monitor these plots annually and develop an abundance index to compare between years and between habitat types. These data will be used to try to determine if there is a relationship between berry abundance and brown bear harvest and DLP kills.

Units 19, 21A and 21E

Activity 1: Review and revise population objectives.

We reviewed brown bear population objectives when the management report was written.

Activity 2: Monitor harvests, seal harvested bears, and analyze harvest data.

We monitored harvest was monitored through sealing certificates and sealed bear hides and skulls.

Units 20A, 20B, 20C, 20F and 25C

Activity 1: Review and revise management objectives.

We reviewed and revised management objectives when the management report was drafted.

Activity 2: Monitor harvests, seal harvested bears, and analyze harvest data.

We monitored harvests through sealing of harvested bears and analysis of harvest data (2000: 20A Mountains = 11 bears; Eastern 20B 10 bears; Remainder Unit 20 and 25C = 22 bears).

Unit 20D

Activity 1: Review and revise management objectives.

We reviewed management objectives when the management report was drafted. Hunter harvest met the management objective but total mortality exceeded the objective.

Activity 2: Monitor harvests, seal harvested bears, and analyze harvest data.

Harvest was monitored by sealing 14 bears killed by hunters and 3 killed by people in defense of life and property.

Unit 20E

Activity 1: Review and revise management objectives.

We reviewed the harvest objective by comparing harvest data to the estimated Unit 20E grizzly bear population. Based on this analysis, no changes to the harvest objective were necessary. The Unit 20E grizzly bear objective was also discussed with the local advisory committees. Primary discussion points were if this harvest level was adequate to benefit moose calf survival and the possible effects of increased incidental harvest of brown bears by caribou hunters.

Activity 2: Monitor harvests, seal harvested bears, and analyze harvest data.

We sealed 18 brown bears (56% male) and analyzed the harvest information to determine if harvest was causing unit-wide or area reduction in the bear population. We also evaluated the effects of bear harvest on moose calf survival.

Activity 3: Monitor berry abundance along 3-5 transects in different bear habitats.

We monitored blueberry abundance along the southern 40 miles of the Taylor Highway using 4 permanent transects (5 1-meter² plots/transect). This was the first year of monitoring. The intent is to monitor these plots annually and develop an abundance index to compare between years and between habitat types. These data will be used to try to determine if there is a relationship between berry abundance and brown bear harvest and DLP kills.

Units 21B, 21C, and 21D

Activity 1: Review and revise management objectives.

We wrote the 2001 Management Report, reviewed and revised management objectives.

Activity 2: Monitor harvests, seal harvested bears, and analyze harvest data.

We monitored harvest of 9 grizzly bears through statewide bear sealing reports and Northwest Brown Bear Management Area harvest reporting systems.

We estimated a population of 350-400 grizzly bears in Units 21B, C, and D.

Unit 24

Activity 1: Review and revise management objectives.

We wrote the 2001 Management Report, reviewed and revised management objectives.

Activity 2: Monitor harvests, seal harvested bears, and analyze harvest data.

We monitored harvest of 22 grizzly bears through statewide bear sealing reports and Northwest Brown Bear Management Area harvest reporting systems.

We estimated a population of 770-930 grizzly bears in 24.

Units 25A, 25B, 25D, 26B and 26C

Activity 1: Review and revise population objectives.

We completed a management report, reviewing harvest data, regulation changes and objectives during RY99 and RY00.

Activity 2: Monitor harvests, seal harvested bears, and analyze harvest data.

We monitored harvests, sealed 30 bears and analyzed harvest data, and established new bear sealing agents on the Yukon Flats.

Activity 3: Conduct a population estimation survey in Unit 26B.

We completed brown bear population estimation survey in Unit 26B. During June 8-20, 2001, a recently developed line-transect technique was used to estimate density of grizzly bears in the southern mountains and foothills of Unit 26B, in an area of approximately 20,700 km² (8,000 mi²). Aerial surveys by up to 5 aircraft observed 138 bear-groups on a total of 821 35-km long transects, for a preliminary estimate of 17.68 grizzly bears/1000 km² (95% c.i. = 13.67-22.90). These calculations included habitat between 800-4000 ft in elevation but excluded the lower density areas above 4000 ft in the mountains and below 800 ft on the coastal plain. Final estimates of population size will include those areas, so that an estimate of sustainable harvest can be determined for the entire Unit.

Segment Period Costs:

<i>Expenditure</i>	Personnel months	Personnel costs	Operating costs	<i>Total</i>
<i>Planned</i>	8.0	50.5	55.8	106.3
<i>Actual</i>	5.1	41.8	45.5	87.3
<i>Difference</i>	2.9	8.7	10.3	19.0

Explanation:

Planned personnel costs were less than actual because sealing bears required less staff time than expected. Operating costs were less than actual because the population estimate in Unit 26B required less aircraft time and logistical support than expected.

Submitted by:

Roy A. Nowlin

Management Coordinator

The Status of Alaska Brown Bears and Factors Influencing Their Populations in Region V

PROJECT ACTIVITIES

Regionwide Activities

ACTIVITY 1: Prepare a draft brown bear management report.

Draft brown bear management reports for Units 18, 22, 23, and 26A were prepared Mar–Aug 2001 and submitted to HQ in early September 2001

ACTIVITY 2: Write a survey and inventory annual performance report.

Performance report for Units 18, 22, 23, and 26A were prepared August 2001 and submitted to HQ early September 2001

ACTIVITY 3: Provide information to the Board of Game on brown bear management.

None.

ACTIVITY 4: Monitor the brown bear harvest through field observations, brown bear sealing reports, interviews with successful hunters and analyze data.

Activities by Unit

Unit 18. Harvest information for the 1999–2000 subsistence hunting season was finalized and 8 of 86 hunters who obtained the WABBMA registration permit were successful. Five hunters utilizing the general hunting regulations reported harvesting bears. Harvest data for the 2000–2001 general hunting season is not finalized.

Unit 22. The reported harvest was 98 brown bears, including 9 DLPs which is the highest number reported in a year. In Unit 22A 22 bears were harvested, 34 bears in Unit 22B, 18 bears in Unit 22C, 16 in Unit 22D and 8 were harvested in Unit 22E. In spite of recent increases in annual harvest, no change in sex composition of the overall Unit 22 harvest is apparent. Annual harvest of male bears has consistently exceeded the female harvest. During this reporting period 67 (68%) male bears, 30 (31%) females, and one (1%) bear of unreported sex were harvested. The percent of males in the harvest has averaged approximately 65% since 1961.

Unit 23. Harvest information was collected in Unit 23 through the statewide brown bear sealing program and through the Northwest Brown Bear Management Area subsistence registration permit hunt. Brown bears were observed opportunistically while conducting surveys for other wildlife species.

Unit 26A. We examined sealing data. Eighteen bears were harvested in Unit 26A, of which 14 were males and 4 were females. Ten were harvested in August, 6 in September, and 2 in May. Fifteen were harvested using aircraft, 1 using a boat, 1 by snogo, and 1 by foot. Nonresidents harvested 17 bears, nonlocal state residents harvested 3, and local residents harvested 3. Ten

hunters used a registered guide, 2 used commercial transportation, and 6 used no commercial services. Twelve bears were harvested in the eastern part of Unit 26A and 6 in the western region.

ACTIVITY 5: Seal bear skins and skulls, determine sex and extract a tooth for aging from brown bears presented for sealing.

Unit 18. We sealed bear skins and skulls, determined the sex and extracted a tooth for aging brown bears presented for sealing.

Unit 22. Brown bears were sealed at the Fish and Game office in Nome and by authorized sealing agents in White Mountain, Shishmaref, and Unalakleet.

Unit 23. Brown bear skulls and skins taken under the Unit 23 general hunt were sealed and a premolar was collected to determine age. The sex of each bear was confirmed from the skin of external organs.

Unit 26A. We sealed bear skins and skulls, determined sex, and extracted a tooth for aging from all brown bears that hunters brought to the office.

ACTIVITY 6: Obtain estimates of ages of sealed bears by tooth sectioning.

Unit 18. Teeth were not sent in for age analysis since the small number of bears taken would not provide a meaningful data set.

Unit 22. Premolars were extracted from sealed bears and sent to Matsons Lab for sectioning and aging. The results from the 2000–2001 harvest were not yet available. However, the results from the 1999–2000 regulatory year were returned and show no change in the age structure of the harvest. Age reports were sent to hunters who harvested bears during the 1999–2000 regulatory year.

Unit 23. Extracted premolars from bears taken in Unit 23 were sent to the Alaska Department of Fish and Game office in Anchorage to be sectioned, stained and aged. The results from the 2000–2001 harvest were not yet available.

Unit 26A. We extracted a tooth for aging from all brown bears that were sealed and sent them into to Matson’s Lab to be sectioned and aged. I have not received the ages for bears harvested in 2000-2001.

Unit 22

ACTIVITY 1: Assess population trends through field observations and analyses of sealing data.

Observations by staff, reports from the public and analysis of sealing data indicate the Unit 22 brown bear population has increased over the last decade and probably exceeds our management goal of maintaining the population at levels estimated during the bear census and research study conducted in the early 1990s. Recommendations to further liberalize bear hunting in Unit 22 are being considered for the November 2001 Board of Game meeting.

ACTIVITY 2: Improve communication with the public to reduce illegal and unreported harvest, and to improve understanding of defense of life or property situations. Collect harvest data through village surveys in selected villages.

Increased communication with the village public safety officers (VPSOs) and tribal councils seems to have resulted in better reporting of bears taken in DLP near villages. When requested, we supplied VPSOs with rubber bullets. A poster explaining the general season and subsistence hunts and DLP regulations was produced and posted in villages throughout the unit. Village harvest surveys were conducted in Brevig, Teller, Shishmaref, and Wales. One Teller and one Wales resident reported harvesting a bear.

ACTIVITY 3: Educate the public about bear behavior and safety to minimize conflicts between bears and the public.

An electric fence bear enclosure was set up and used as a demonstration to alleviate bear problems at a camp in the vicinity of Nome. Public service announcements were aired on the radio, scanner and newspaper emphasizing awareness of bears in the area, the importance of clean camps and not leaving food, dog food, garbage or other attractants unattended or accessible to bears. Copies of the bear safety video, "Staying Safe in Bear Country", are available on loan from the Nome Fish and Game office to interested groups or individuals.

Units 18, 23 and 26A

ACTIVITY 1: Monitor population trends through field observations, census results of various research projects, analysis of reports from registration permit holders, and analyses of sealing data.

Unit 18. The department, FWS, and BLM continued the cooperative brown bear radiocollaring project. Animals have been tracked since 1993 to determine seasonal movements and estimate productivity. We replaced existing collars and deployed several new ones during late spring 2000.

Unit 23. Brown bear abundance was monitored through opportunistic observations while surveying and radio tracking other wildlife species. Brown bear abundance was also discussed with Advisory Committee members, many local residents and some long-term guides and transporters.

Unit 26A. From sightings of bears, during surveys for other species, and reports from hunters and pilots, it appears that brown bears are plentiful in Unit 26A and are probably near carrying capacity.

ACTIVITY 2: Improve communication with the public to reduce the magnitude of illegal and unreported harvest and to improve understanding of defense of life or property situations to remove nuisance bears.

Unit 18. Modest improvements have been made toward public use and understanding of the defense of life and property (DLP) regulations. 3 bears were killed and reported by residents under DLP provisions.

Unit 23. DLP regulations were discussed with several Advisory Committees and numerous individuals who live in Unit 23.

Unit 26A. Unit 26A. We discussed bear regulations and the defense of life or property provision at public meetings and on radio programs, and had articles in the newspaper.

ACTIVITY 3: Improve communication with the public regarding the take of radiocollared bears so that ADF&G can conduct a population census in Unit 18.

Unit 18. We contacted local residents to explain hunting regulations for brown bears. We met with representatives of the Association of Village Council Presidents (AVCP), FWS, Subsistence Division, local Advisory Committees, and local IRA councils. We discussed the WABBMA subsistence brown bear registration permit system, improving our harvest information, liberalization of seasons and bag limits, and the continuation of the cooperative brown bear research project.

ACTIVITY 4: Conduct a brown/grizzly bear population estimate using radiocollared bears and the Petersen/Lincoln index in Unit 18.

Unit 18. No work was completed toward this objective due to local opposition to deploying the radio collars necessary to conduct a census.

ACTIVITY 5: Develop updated population objectives in cooperation with the public and the USF&WS in Unit 18.

No work was completed toward this objective.

Other activities funded by Federal Aid on this project:

In Unit 18, active participation by local residents in the management process has increased communication with management agencies. Regulations more suitable for local users have fostered improved hunter participation. Knowledge of hunting regulations has increased through public announcements, newspaper articles, instructions to license vendors, and local meetings. Continuing the registration permit option for those hunters interested in utilizing brown bears primarily for the meat is in the best interest of the resource.

Statewide Segment Period Project Costs: \$390,400

Fiscal year 2000–2001	Region				Statewide
	I	II	III	V	Total
Actual	165.8	115.1	87.3	22.2	390.4

Submitted by:

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